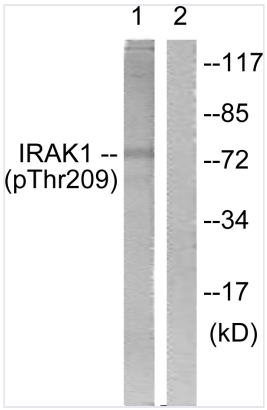
IRAK1 Antibody

PRODUCT OVERVIEW

Product Name	IRAK1, Antibody
Full Product Name	IRAK1 (Phospho-Thr209) Antibody
Product Gene Name	anti-IRAK1 antibody
Product Synonym Names	IL1RAK; IRAK; IRAK-1; Interleukin-1 receptor-associated kinase 1; Pelle-like protein kinase; kinase IRAK1; Mplk
Species Reactivity	Human
Form/Format	In phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	Affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.
Specificity	IRAK1 (Phospho-Thr209) antibody detects endogenous levels of IRAK1 only when phosphorylated at threonine 209.
Preparation and Storage	Store at-20 degree C for 1 year.
Molecular Weight	68,022 Da
OMIM	300283
3D Structure	ModBase 3D Structure for P51617
Immunogen	The antiserum was produced against synthesized phosphopeptide derived from human IRAK1 around the phosphorylation site of threonine 209 (R-G-TP-H-N).
All Sites	Human: Thr209 Mouse: Thr209
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-IRAK1 antibody	Western Blot (WB), ELISA (EIA)
Application Notes for anti-IRAK1 antibody	WB: 1:500~1:1000 ELISA: 1:40000
Related Product Information for anti-IRAK1 antibody	MBS8509758 is an antibody targeting IRAK1. Also known as IRAK1 (Phospho-Thr209) Antibody. Reactive in Human.
Product References and Citations for anti-IRAK1 antibody	Cao Z., Science 271:1128-1131(1996). Reichwald K., Mamm. Genome 11:182-190(2000). Jensen L.E., J. Biol. Chem. 276:29037-29044(2001).
Other Notes	Small volumes of anti-IRAK1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-IRAK1 antibody
Western blot analysis of extracts from HeLa cells, using IRAK1 (Phospho-Thr209) antibody.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IRAK1. It may not necessarily be applicable to this product.

NCBI GI #	68800343
NCBI GeneID	3654
NCBI Accession #	NP_001020413.1
UniProt Primary Accession #	P51617
UniProt Secondary Accession #	Q7Z5V4; Q96C06; Q96RL2; D3DWW3; D3DWW4
UniProt Related Accession #	P51617
GenBank Nucleotide #	NM_001025242.1
NCBI Official Full Name	interleukin-1 receptor-associated kinase 1 isoform 2
NCBI Official Synonym Full Names	interleukin 1 receptor associated kinase 1
NCBI Official Symbol	IRAK1
NCBI Official Synonym Symbols	IRAK; pelle
UniProt Protein Name	Interleukin-1 receptor-associated kinase 1
Protein Family	Interleukin-1 receptor-associated kinase
UniProt Gene Name	IRAK1
UniProt Synonym Gene Names	IRAK; IRAK-1
NCBI Protein Information	interleukin-1 receptor-associated kinase 1
NCBI Summary for IRAK1	This gene encodes the interleukin-1 receptor-associated kinase 1, one of two putative serine/threonine kinases that become associated with the interleukin-1 receptor (IL1R) upon stimulation. This gene is partially responsible for IL1-induced upregulation of the transcription factor NF-kappa B. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

UniProt Comments for IRAK1	Serine/threonine-protein kinase that plays a critical role in initiating innate immune response against foreign pathogens. Involved in Toll-like receptor (TLR) and IL-1R signaling pathways. Is rapidly recruited by MYD88 to the receptor-signaling complex upon TLR activation. Association with MYD88 leads to IRAK1 phosphorylation by IRAK4 and subsequent autophosphorylation and kinase activation. Phosphorylates E3 ubiquitin ligases Pellino proteins (PELI1, PELI2 and PELI3) to promote pellino-mediated polyubiquitination of IRAK1. Then, the ubiquitin-binding domain of IKBKG/NEMO binds to polyubiquitinated IRAK1 bringing together the IRAK1-MAP3K7/TAK1-TRAF6 complex and the NEMO-IKKA-IKKB complex. In turn, MAP3K7/TAK1 activates IKKs (CHUK/IKKA and IKBKB/IKKB) leading to NF-kappa-B nuclear translocation and activation. Alternatively, phosphorylates TIRAP to promote its ubiquitination and subsequent degradation. Phosphorylates the interferon regulatory factor 7 (IRF7) to induce its activation and translocation to the nucleus, resulting in transcriptional activation of type I IFN genes, which drive the cell in an antiviral state. When sumoylated, translocates to the nucleus and phosphorylates STAT3.
Research Articles on IRAK1	**1.** NLRC3 promoted K48-linked polyubiquitination and degradation of interleukin-1 receptor-associated kinase 1 (IRAK1).
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